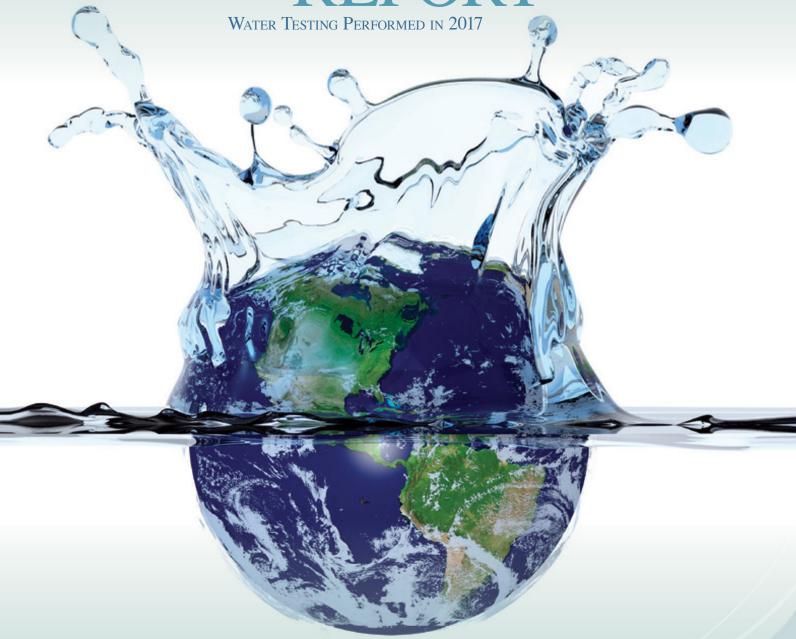
# ANNUAL WATER OUALITY REPORT





Presented By
City of Yukon Operated by
Veolia Water North America

## **Quality First**

Once again we are pleased to present our annual water quality report. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water

protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us the opportunity to serve you and your family.

Water treatment is a complex, time-consuming process.

# **Substances That Could Be in Water**

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems.

U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably

be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include: Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

# **Community Participation**

well-informed customers are our best allies.

You are invited to participate in our public forum and voice your concerns about your drinking

We encourage you to share your thoughts with us on

the information contained in this report. After all,

water. We meet the first and third Tuesdays of each month beginning at 7:30 p.m. in the Centennial Building located at 12 S. Fifth Street, Yukon, OK.

## **Important Health Information**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking

water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <a href="http://water.epa.gov/drink/hotline">http://water.epa.gov/drink/hotline</a>.

# Where Does My Water Come From?

The City of Yukon customers are fortunate because we enjoy an abundant water supply from two sources. Our water sources are groundwater from Garber-Wellington Aquifer and purchased water provided by Oklahoma City. The aquifer supplies an average of approximately 2.6 million gallons of groundwater per day to our residents. In order to meet the new arsenic regulations, Yukon water is blended with OKC water prior to the entry point of Yukon. Depending on the month, 60 percent of the total water supply for Yukon is OKC water. This process allows the City of Yukon's water to remain in compliance with federal regulations.

## **Lead in Home Plumbing**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <a href="https://www.epa.gov/lead">www.epa.gov/lead</a>.

## **Source Water Assessment**

The City of Yukon and Veolia Water have conducted a Source Water Assessment and Protection Ground Water Sources Report which was submitted to the Oklahoma Department of Environmental Quality in 2002. The report indicated that the Qualitative Susceptibility Rating (QSR) was low. This report is on file with Veolia Water and may be reviewed at 501 W. Wagner Road, Yukon, OK, during regular business hours.

# QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Gary Giddings, Project Manager, at (405) 354-6245. Veolia Water is located at 501 W. Wagner Road in Yukon, OK 73099.

# **System Assessment Update**

Coliforms are bacteria that are naturally present in the environment. They are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which

contamination may enter the drinking water distribution system. We found coliforms, indicating the need to look for potential problems in water treatment or

distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct one Level 1 assessment, which was completed. In addition, we were required to take one corrective action and we completed the following action: The sampling faucet was replaced with a ball valve at the bad sample location.

During the past year, no Level 2 assessments were required to be completed for our water system.

## **Test Results**

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information in the data tables shows only those substances that were detected between January 1 and December 31, 2017. Remember that detecting a substance does not necessarily mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels. The state recommends monitoring for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 3rd stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES									
				Oklahoma	City-Draper WTP	City	of Yukon		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2012	15	0	< 0.4744	<0.4744<0.4744	5.09 <sup>1</sup>	3.35-5.091	No	Erosion of natural deposits
Arsenic (ppb)	2013	10	0	<2.0	<2.0-<2.0	2.02	<2.0-2.02	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2013	2	2	0.057	0.032-0.057	0.1813	0.181-0.1813	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
$\begin{array}{l} \textbf{Beta/Photon Emitters}^4 \\ (p\text{Ci/L}) \end{array}$	2012	50	0	2.611	2.611–2.611	2.13	2.13–2.13	No	Decay of natural and man-made deposits
Bromate (ppb)	2017	10	0	3.36	<5.10–6.54	NA	NA	No	By-product of drinking water disinfection
Chloramines (ppm)	2017	[4]	[4]	3.32	1.50-3.90	NA	NA	No	Water additive used to control microbes
Chlorine (ppm)	2017	[4]	[4]	NA	NA	1.0	0.50-1.00	No	Water additive used to control microbes
Combined Radium (pCi/L)	2012	5	0	<0.495	<0.495-<0.495	NA	NA	No	Erosion of natural deposits
Fluoride (ppm)	2017	4	4	0.69	0.62-0.69	0.45	0.45-0.45	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2017	60	NA	43.65	5.94–50.80	32.3	16.8–44.2	No	By-product of drinking water disinfection
Nitrate (ppm)	2017	10	10	0.115	0.000-0.115	0.47	0.47–0.47	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] <sup>5</sup> (ppb)	2017	80	NA	70.87	10.57–76.41	63.6	35.3–81.3	No	By-product of drinking water disinfection
Total Organic Carbon (ppm)	2017	ТТ	NA	0.371	0.371-0.371	NA	NA	No	Naturally present in the environment
Turbidity (NTU)	2017	TT	NA	0.24	<0.24-0.24	NA	NA	No	Soil runoff
<b>Turbidity</b> (Lowest monthly percent of samples meeting limit)	2017	TT = 95% of samples meet the limit	NA	100	NA	NA	NA	No	Soil runoff
Uranium (pCi/L)	2012	27	0	<1.0	<1.0-<1.0	3.21	2.6-3.21	No	Erosion of natural deposits

#### Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

				Oklahoma (	City-Draper WTP	City of '	Yukon		
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2017	1.3	1.3	0.215	0/55	0.03611	0/301	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2017	15	0	<1.00	0/55	ND	0/301	No	Corrosion of household plumbing systems; Erosion of natural deposits

#### OTHER SUBSTANCES (OKLAHOMA CITY - DRAPER WTP)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Chlorate <sup>6</sup> (ppb)	2013	36.4	<20.0–36.4	By-product of drinking water disinfection, making of dyes, explosives, matches, printing fabrics, herbicides, antiseptics, toothpaste, and in paper pulp processing
Cryptosporidium (Units)	2016	< 0.075	0-0.075	Storm runoff; Agriculture runoff; Leaking sewage systems
Chromium, Hexavalent <sup>6</sup> (ppb)	2013	0.141	<0.030-0.391	Naturally occurring; By-product of making steel and other alloys, plating, dyes and pigments, leather, and wood preservation
Chromium, Total <sup>6</sup> (ppb)	2013	0.428	<0.200-0.471	Naturally occurring; By-product of making steel and other alloys, plating, dyes and pigments, leather, and wood preservation
Molybdenum <sup>6</sup> (ppb)	2013	2.76	<1.00-3.24	Naturally occurring; By-product of making steel and other alloys, lubricants, dyes, and pigments
Strontium <sup>6</sup> (ppb)	2013	295	42.9–763	Naturally occurring; By-product of making electronics and fireworks
Vanadium <sup>6</sup> (ppb)	2013	2.78	<0.200–7.50	Naturally occurring; By-product of making steel alloys, chemical manufacturing, ceramics, and batteries
<sup>1</sup> Sampled in 2015				

<sup>&</sup>lt;sup>1</sup>Sampled in 2015.

### **Definitions**

**AL** (**Action Level**): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

**Level 1 Assessment:** A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

**Level 2 Assessment:** A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

**LRAA (Locational Running Annual Average):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

#### MRDL (Maximum Residual Disinfectant Level):

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

# MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below

Which there is no known or expected risk to health.

MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

**NTU** (**Nephelometric Turbidity Units**): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

**ppb** (parts per billion): One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**TT** (**Treatment Technique**): A required process intended to reduce the level of a contaminant in drinking water.

<sup>&</sup>lt;sup>2</sup> Sampled in 2017.

<sup>&</sup>lt;sup>3</sup> Sampled in 2014.

<sup>&</sup>lt;sup>4</sup>The MCL for beta particles is 4 mrem/year. The U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.

<sup>&</sup>lt;sup>5</sup> Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their livers, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

<sup>&</sup>lt;sup>6</sup> UCMR3 analyte.

<sup>&</sup>lt;sup>7</sup>Long-Term 2 Enhanced Surface Water Treatment Rule.